If you have the right pricing and you have the right and enforced operating support systems between ILECs and CLECs such that customer experience is a positive one from competition and not what has been experienced to date in any territory in the U.S., then I believe you will easily find that the competitors will move into the smaller end of the marketplace, will use facilities that exist and are being built today in order to reach that end of the marketplace.

MS. MATTEY: Thank you.

MR. SALEMME: Currently we do not have in place the mechanisms to allow full blown competition to exist. We have been very successful at NEXTLINK. We have been able to put facilities in the ground. We have been able to sign up customers as other ALTS members have been able to do, but the operational support systems still are not in place to move mass customers. There are still a lot of important elements that have to be taking place, and what we are doing is we are getting slow rolled on each of these.

Bell Atlantic, in their filing in New York with the New York Public Service Commission, agreed to provide an extended link, but there is ambiguity in that. There is still an inability to get to those bundled customers, the loops of those unbundled customers, without, you know, a lot of extra cost that they want to add on. Those have got to

be eliminated if you want to be able to cost effectively enter that market and provide service to customers.

MR. TOWNSEND: If I could add one further response?

MS. MATTEY: Sure.

MR. TOWNSEND: There is a process, as I recall, in the Act with respect to new entrants and incumbents negotiating privately terms and conditions, as well as arbitration and mediation, as well as Federal District Court review of any decision by the state commissions.

We constantly hear about the problems associated with negotiation and with the new entrants gaining the necessary elements that they need, but there is a process, and the Act has this process in place. Certainly less than two years -- less than two years -- since the Commission began implementation of the Act to say that there is not competition in the local exchange ignores the evidence, some of which I presented earlier and USTA has put on the record in a number of forums and proceedings.

MS. MATTEY: Okay. I think we are running out of time for the first panel. I will take one question from the audience if anyone has anything they wish to raise. If not, we will move on to the second panel.

Thank you very much.

(Panel excused.)

MS. MATTEY: Okay. I think we are ready to begin. As we all know, members of the industry have proposed various methods for combining network elements. For example, the Bell companies have proposed to allow new entrants to combine network elements through various forms of collocation. Some new entrants, on the other hand, have suggested electronic or logical methods for combining network elements.

Our second panel will provide a technical overview of several of these methods and will lay the groundwork for the discussion that follows in the third and the fourth panel. Participating on the panel this morning are Jeff Owens from U.S. West, Bryan Kennedy from CON-X, Bob Falcone from AT&T, and Frank Lauria from COMMTECH.

We will start out with Mr. Owens.

MR. OWENS: Thank you. I would like to review today several of the options that U.S. West makes available to competitive local exchange carriers for the purposes of combining unbundled network elements.

Like the other LECs, we make available the option of using physical collocation, caged spaces where a CLEC can place equipment in our central office, and we will deliver to that collocation space unbundled network elements. This allows the CLEC to combine or connect the unbundled network element to their equipment for delivery outside of the

central office to a remote CLEC owned switch, for example. It also allows the CLEC to combine one unbundled network element with another unbundled network element.

U.S. West provides an additional option for those CLECs who choose not to have a cage. We offer cageless collocation, which permits a CLEC to avoid the cost of the cage enclosure. In that case again the CLEC would have access to the central office to work with their equipment and to combine unbundled network elements or to attach an unbundled network element to their equipment.

The additional options that we would like to concentrate on today would be for those CLECs who do not choose or have the need to collocate equipment in our central office. We have an arrangement that we refer to as a single point of termination frame, a SPOT frame. That SPOT frame is a place where U.S. West will deliver unbundled network elements for the CLEC's use.

The SPOT frame is really nothing more than an intermediate distribution frame like we have in our central offices. It is a cross connection panel, and the way it would work is we would work with the CLEC to determine how many unbundled loops or unbundled switch ports that they would like to have access to, and we would deliver to that SPOT frame tie pairs that would be available to access the unbundled loops, unbundled switch ports, that the CLEC would

like to utilize. The CLEC would then enter the central office like any other collocator and could run jumpers on that SPOT frame for the purposes of combining unbundled network elements.

We offer SPOT frames in two flavors. One would be a dedicated frame that would be available for the exclusive use of one CLEC. We also offer a sub-option, which provides some additional security for the CLEC. We can put locked doors on the SPOT frame that would prevent unauthorized access to the CLECs SPOT frame.

For those CLECs who may not have enough volume to justify a dedicated frame, we offer a different flavor, which is a common SPOT frame, which could be shared by many CLECs to combine unbundled network elements, so we offer both dedicated and common SPOT frames.

Again, the way it would work is a CLEC would have access to the SPOT frame in the central office for combining unbundled network elements. We would anticipate that a CLEC would order, for example, in advance some unbundled line side ports, which we could deliver to the SPOT frame, that would allow the CLEC to test for dial tone.

In some cases, if they are going to serve a large building like this they might want to pre-provision some unbundled loops to that building, and we would deliver those unbundled loops to the SPOT frame, and the CLEC could run

the jumpers from the loops to the line side ports and have basic exchange service available to this building. As they win customers in the building, all the work could be done essentially here in the building. Other options are available as well.

We think this is a reasonable and effective way to permit those CLECs who want to combine unbundled network elements to do so without incurring some of the costs associated with collocation, but it also gives CLECs some migration options so that, as MCI indicated earlier, if a CLEC wanted to start out with no equipment in our central office and to operate exclusively using our unbundled network elements, they could do so.

At this point in time in the future when they have a switch in the area they could obviously replace the unbundled switching that they have ordered from U.S. West with their own switching. They could do so by obtaining collocation in that central office, for example, and installing some equipment there, or they could use the SPOT frame to connect a loop to unbundled transport to deliver that loop to their switch in a distant location, so it gives plenty of options to the CLEC for migration strategies.

MS. MATTEY: Thank you very much.

Mr. Kennedy?

MR. KENNEDY: Thank you. I am Bryan Kennedy,

Vice-President of Client Services for CON-X Corporation, and I am very pleased to be here today. Thank you. CON-X is an Alabama corporation formed for the sole purpose of providing a cost effective, reliable, automatic cross connect system for the telecommunications industry.

We have taken a slightly different approach to this. The metallic MAC system, or metallic automated cross connection system, is a remotely controlled robotic cross connect device that mounts in a standard 23 inch relay rack. The system places a physical metallic connection using a plastic carrier that has two gold plated contacts into a stack of printed circuit boards, making again a physical metallic connection that is not susceptible to power outages or anything of this nature.

It interfaces to the network using standard 50 pin amp type connections, and it can be used for both outside plant applications, as well as inside main frame replacements or, in this situation, ideally for combining of network elements from the CLECs perspective.

The product is a NEBs Level III compliant, has been through all the Bell Corporation compliancy testing. The particular device utilizes the same robot mechanism and different matrix panels to fit different applications. That is our concept, so that where we use it in an outside plant application where you have a two to one ratio between your

distribution plant and your feeder plant, we have the panel pre-built with that wedge, if you will. In central offices where you are using more of a one to one ratio, we have matrix panels that fit that application.

In this particular case, we have designed a specific panel that combines network elements by providing basically an ABC type switch arrangement that in the beginning if a CLEC wanted to provide or bundle network elements from the ILEC's perspective then you could do so by just placing the connection between the ILEC and the subscriber.

At some point in time, if they wish to bring in their own switching technology there is another input available at that point so that they could then insert their own dial tone and take just the subscriber link to their own port, so it is a very flexible device that again can be remotely accessed, allowing the CLEC to activate the circuits themselves.

Coordinated cut overs are made easier by the fact that it is a minimum amount of time that the subscriber is out of service and the orders can be processed and then the day of the cut can be handled very swiftly.

The cost for this device runs for this particular application only about $14 a pair, so that again being an issue, I think, is what we are hearing is cost. Again, what

we are looking to provide is a cost effective, reliable solution for combining network elements, any location where you have physical terminations you have to put together.

MS. MATTEY: Thank you.

Mr. Falcone?

MR. FALCONE: Good morning. I am Robert Falcone representing AT&T.

Before I go on to discuss the alternative that AT&T has to collocation for recombining the elements, I think it is important, though I realize it is the subject of the next panel, for the audience to understand what is wrong with the various flavors of collocation that are being put forth.

I say the various varieties or flavors of collocation because the incumbent LECs have been very creative in masking virtual or physical collocation with various names, whether it be assembly rooms, SPOT frames, using the CON-X robot device, what I will call the SBC-5 varieties of collocation, whether it be in the central office, out in the parking lot or in the McDonalds basement down the block. They all are some form of collocation, and they all subject the CLEC and the CLEC's customers to the same pitfalls of any form of collocation.

Those pitfalls, and I will touch on these briefly because again it is the subject of the next panel, include a

delay to market entry. You have to establish this collocation arrangement in every single central office.

They involve unnecessary manual processes. No matter what you use, even if it is the CON-X robot, somebody has to make physical connections and move wires around to connect it to the robot or to the collocated space. That manual work leads to human error, and it leads to gating the number of customers that can be converted to a local service provider on a given day just because of the intensive manual nature of the labor that is involved.

It involves unnecessary customer outage. The customer's line has to be taken down to be physically moved to the collocated facilities. It involves unnecessary service degradation. Some customers have to be taken off of state-of-the-art loop technology, integrated digital loop carrier technology, so that they can be physically moved. Other customers are going to have additional points of failure just to establish these collocation arrangements.

Last, but not least, there is unnecessary costs. Mr. Kennedy talked about the cost per line, but he does not include all the recurring costs of renting the collocated space to put the robot in, all the connections that we have to pay for to connect the robot. There are all kinds of hidden costs that are astronomical.

I keep saying unnecessary because all of this is

unnecessary because there is a better way. If the CLECs find themselves in this position where they have to combine elements themselves, there is a better way of doing this, and that way is to use the unbundled switch, the Recent Change capabilities of the unbundled switch.

Recent Change is the process the incumbent LECs use today to combine elements and provide service for their customers. Recent Change is the process that customers use today to change their long distance carriers. If a customer wants to move from AT&T long distance service to MCI long distance service, Recent Change is the process that is used to effect that change.

Recent Change is capable of combining or separating the functionality of the loop from the functionality of the switch as effectively as if someone went and ripped the wires off the frame, as the ILECs are proposing to do.

The benefits to Recent Change are just really the converse of everything I have laid out for collocation. Recent Change minimizes customer outage. It eliminates the market entry delay caused by having to establish collocation arrangements in every single central office in the nation. It eliminates the segregation created by collocation. It eliminates all the human error by eliminating all the manual processes that would be involved with collocation.

It does not restrict the number the customers that can change their local service provider again because there is no manual processes involved. It is all done via software. It is a much more cost effective method of combining the elements than collocation is. It puts the CLECs at parity with the ILECs.

I say it puts them at parity because today if I were going to move from my premises and let's say on July 1 I would call Bell Atlantic, who is my provider, and tell them on July 1 I am moving and to discontinue my service, Bell Atlantic does not roll a truck to my house to remove my service, nor do they send a technician to the frame to remove my service. They simply do a Recent Change in the software to switch to say effective July 1 to remove my service and render my last bill.

Assuming next week someone moves into my home or apartment, that person calls Bell Atlantic and says they would like service. Again, Bell Atlantic does not have to do any physical work to provide service to that person. They do a Recent Change in the switch to establish service with all the features and functions and capabilities that that customer asks for. That is the same kind of parity that the CLECs are asking for and the same kind of ability that the CLECs are asking for.

The ILECs will make a lot of noise and a lot of

claims about network security around allowing CLECs to have Recent Change capabilities. This is the reddest of red herrings out there.

First off, Recent Change capabilities are allowed and permitted by the ILEC to their large CENTREX customers today, so other parties do do Recent Changes on the ILEC switch today other than ILEC employees.

The CENTREX customers do these Recent Changes using a mediation system or an operation support system as an interface that restricts or limits the types of Recent Changes that those CENTREX customers can do and the lines that they can do it on, and all we are asking is that we get the same type of mediation capability, which is very technically feasible, to allow CLECs to have restricted Recent Change capabilities in the switch only on CLEC lines.

In summary, first off nothing is more pro competition and pro consumer than not allowing the ILECs to engage in this spiteful activity of ripping things apart just to have the CLECs figure out how to put them back together again. However, we find ourselves in this bizarre environment.

If two cooperative parties were asked to have their engineers sit together in a room and figure out the best way to allow CLECs to combine the elements, collocation would not be the answer that those parties would come out

with.

Thank you very much.

MS. MATTEY: Thank you.

Mr. Lauria?

MR. LAURIA: Great. Thank you, Carol.

My name is Frank Lauria. Myself and my colleague, Dominick Calabrese, represent COMMTECH Corporation. At COMMTECH we provide both software and telecommunications infrastructure solutions that help manage today's evolving data and voice networks.

As part of that, these solutions are very well geared toward the kinds of things that were just mentioned in terms of managing the unbundled network elements for providing unbundled and actually rebundling of unbundled network services for telecommunications CLEC/ILEC management.

Our experience in this area involves a product called Macstar, which in the past is currently being used by imbedded ILECs for the management of CENTREX services. This knowledge allows us to build the system called FastFlow, which we are proposing for use in this environment.

What I would like to do, and I have presentation material here as handouts. I have approximately 50 of these, but I would like to walk through this FastFlow solution and how it is used and how it uses Recent Change to

automate this process.

Basically, the objective is to provide a technically working OSS solution that will allow for the management of the ILEC/CLEC interface and support electronic unbundling. There are two components to this. There is a FastFlow CLEC component, which resides on the CLEC's premise, and in that it provides the CLEC with service rep management so as they actually take the order it flows to the ILEC through the EDI process, which is currently being used in other areas, including long distance.

The second portion of this is called FastFlow ILEC, and it resides in the ILEC's domain, so physically it is part of the infrastructure that is in the ILEC's telecommunications data center and is connected through either directly to the ILEC's network elements or through their current service order system.

It allows the CLEC, through partitioned control, to manage the CLEC lines that are in ILEC facilities. Again, this is all what we call generally available knowledge in the telecommunications industry using the digital switches that today make up today's ILEC network.

The flow of how this scenario would work is as follows. A customer would call the CLEC, or the CLEC would call the customer. The CLEC service rep would input the telephone number into the FastFlow CLEC graphical user

interface.

From there, the FastFlow CLEC would query the ILEC's customer service records and incorporate the data automatically into the CLEC sales template displayed on the service rep's desktop. This completes the transaction from the service rep's perspective and allows the EDI transaction to actually flow to the ILEC.

Once the ILEC is in receipt of this activation message, FastFlow notifies the ILEC to restore the suspended line or otherwise verifies the status of the line. In other words, what we are doing is we are doing a suspend operation using the same Recent Change capabilities that are in the switch today and used in the generally available methodologies that are used just to suspend the line today in a scenario, for instance, where a customer did not pay their bill.

At that point, very quickly after the suspend is put on a restore is put onto the line, and that restore is performed from the FastFlow ILEC system. Control over that line is then not only initiated, but completely under the control of the CLEC.

Now, since the hardware platform FastFlow ILEC, it resides in the actual ILEC's facilities in their data center. The ILEC does have control over this process to the point of not allowing unauthorized use, etc., of this kind

of technology. Further, this kind of firewall protection and partition database protection allows one CLEC, for instance, not to have access to another CLEC's data, etc., and so on.

Using this methodology, which is very straightforward and is in use today for both CENTREX management and for the operation of today's residential services, it is very technically feasible and in fact very straightforward to have this in operation in approximately six months in most of the ILECs today from a technical perspective.

MS. MATTEY: Thank you.

Before I start off with my first question, I wanted to remind everyone that we will be discussing this in much more depth in the panel right after lunch, so to the extent that we do not touch upon everything there will be an opportunity to be addressing these issues this afternoon as well.

My first question goes to the commercial scaleability of each of these methods. Under each of these proposed methods, how many new customers could a new entrant connect per day? Do you want to start off, Mr. Owens?

MR. OWENS: I think it would depend on the CLEC's forecasting. If the CLEC had planned and delivered unbundled switching, unbundled loops, to their SPOT frame

ahead of time, I do not know that there is a particular limit on the number of customers who could be switched in a given day.

I think it depends on the amount of foresight and forecasting and planning that the CLEC has provided to determine how many they could do in a day.

MS. MATTEY: Okay.

MR. GOLDSTEIN: Excuse me. I am sorry. I guess the question is if the forecasting was not accurate and the orders came across, how many unbundled loops could you cross connect to the SPOT frame in a given day?

MR. OWENS: I do not know. Hundreds and hundreds, I am sure. The work that would be required by our technician would be the running of a jumper from the line side or from the loop that appears on our cosmic frame to a type hair frame. There would be one jumper run per loop.

Your question really is how many jumpers could our technicians run in a given day in a given location, and I do not know what that limit is, but it would be in the hundreds, I am sure.

MS. MATTEY: Okay. Mr. Kennedy, do you want to address that?

MR. KENNEDY: Sure. With respect to our product, a typical scenario might be that the CLEC would then gain access in chunks or circuit patches into these cosmic

frames, if you will.

As far as the robot is concerned, if that is set up ahead of time or pre-done, there would be no additional work required at the time. The actual cut itself requires about 30 seconds, so to do the math you can see the robot is capable of placing a large number of cross connects in a day. It does maintain monitoring of itself to keep from working too hard, if you will, but it can produce many, many cross connects in a day.

MS. MATTEY: When you say it is 30 seconds per cut, is there some amount of time before it can move on and do the next one, or is it literally consecutively?

MR. KENNEDY: Literally it can operate consecutively if it is put in as a batch routine that is loaded to produce a number of cross connects at a time. It would proceed from one cross connect to the next.

MS. MATTEY: Okay.

MR. KENNEDY: Yes.

MS. MATTEY: Mr. Falcone?

MR. FALCONE: May I contrast what we have heard versus what I am offering up? Let me start with Mr. Kennedy.

I do not doubt his robot can do one every 30 seconds. That is not the gating factor. The gating factor is the loops have to be wired to the robot, the ports have

to be wired to the robot, and once all of that is done somebody else has to make a software change to move the customer off the old port, based on Bell Atlantic's policy, who Bell Atlantic is the one pushing this CON-X device. They have to do a software change to move the customer off of their old port onto the new port.

There are three diverse work groups in three different locations who have to coordinate their work to make it all happen. There is the on site work force who has to move the cross connections, there is the CLEC technicians who have to operate the robot, and then there is another ILEC work force who has to do the software change to move the customer's line.

All that stuff has to go like a Swiss watch because while that is happening, this customer has no service. If one of those three operations goes wrong, this customer has no service for an extended period of time. Although the robot might work in 30 seconds, all this other stuff that has to happen before it even gets to the robot takes a very long time.

I would agree with Mr. Owens. If a central office were fully staffed working around the clock doing nothing but this kind of work, of which I do not think there is an RBOC in the nation who has central offices fully staffed round the clock with frame crews working three shifts doing

this kind of work, you could probably put 100 or 200 per central office per day.

However, that is not, to me, robust competition, and that is not reality. They do not have that kind of staff on site today. Many of their central offices have no staff on site today. They are unmanned central offices. They only send people there when they are needed. Maybe in that case the robot has some utility. Certainly it does not for what we are asking for here.

Let's contrast that to Recent Change, what we are offering up. Recent Change is a software driven change. The software goes into a buffer. The buffer updates the switch. As the switch gets full, the buffers clean out. It keeps going in.

Tens of millions of customers change their long distance provider every year, and that is done by Recent Change, and that is only in addition to all the other Recent Change activity that the ILEC does for himself. Customers changing their LD provider could be measured in tens of millions. Add that on top of all that the LECs do for themselves, and you can see this is virtually limitless.

MS. MATTEY: Okay.

MR. LAURIA: Carol, I would like to actually add to that. Really the situation is one of being proactive versus being reactive also.

In any kind of mechanical situation, whether it be manually changing the wires or using a robotic device for that, it needs to be pre-positioned. With the software solution, the next order, if you will, can be anywhere within the network.

Since it is being done through a central database in a data center, that instruction, if you will, goes out through the normal service order activation process that is currently being used today, goes to any switch at any point and makes that change, so it will do the disconnect or the snip and the restore very quickly, very easily, without having to reposition or position a robotic device at every frame, not only in every frame in every central office in order to be proactive, but in every frame that is on a next generation digital loop carrier system or digital loop carrier system that is out in the loop.

The implications of that in providing service everywhere and being able to do this on a ubiquitous basis are astronomical. Recent Change simply does not have that issue whatsoever.

MS. MATTEY: Okay. Do any of you want to make a follow up comment?

MR. OWENS: I would like to respond. This is quite a magic switch that AT&T is proposing. What they are proposing is a customer who is in service today who is

served by an incumbent LEC can switch over to a CLEC through resale. We agree that that can be done. We know the prices that apply. We know the terms and conditions that apply.

What they would have us believe is that the Act intended for us to install a magic switch that when we turn that customer off and turn them back on instantaneously, that customer is magically converted from resale to unbundled network element pricing.

This is, I think, the best term that I can apply to this is it is a sham. It is sham unbundling in its simplest terms, and I think we ought to be very careful about recognizing what this is all about. This is about pricing.

With regard to the notion that AT&T proposed, the limits on our ability to run jumpers, he conveniently ignores the possibility that AT&T might do some preplanning in a given central office and might actually order some unbundled switch ports ahead of time and might test them ahead of time and have them available in their inventory ahead of time so that when they win a customer they do not need to have three jumpers run. They only need to have one jumper run like LECs do.

Finally, AT&T's notion of competition is kind of unique. It presumes that there is really only one form of competition. Customers are either served by the existing

combination of loops and switching that U.S. West and other incumbents use to serve customers, or they are magically converted to unbundled network elements in place with no new jumpers being run.

They have ignored the fact that there are other competitors out in the world who are ordering unbundled loops, using their own switches, other competitors who have their own switches selling services directly to customers over their own facilities, so we are going to have jumpers moving around through competition of what AT&T's plans are for keeping a dedicated inside plant and dedicated outside plant in place for customers.

The notion that competition is merely a software changing shifting customers between AT&T and U.S. West is a very limited form of competition.

MS. MATTEY: Okay.

MR. FALCONE: May I?

MS. MATTEY: Yes. I remind you, we will be getting into these issues more in the afternoon, but I --

MR. FALCONE: Somehow I doubt it. Not to this extent.

First, three things that I want to comment on. There is no bigger sham than collocation because the fact of the matter is the Eighth Circuit Order says the CLECs have to combine the elements themselves.

Well, every ILEC has said that we could put in pre-wired frames. Once a pre-wired frame is installed, the ILEC is doing all of the work to connect the loop and the switch port through the pre-wired frame. The CLEC truly, with collocation, is not recombining anything. The ILEC still has to do all the work and the ILEC's technicians.

Let's contrast that to Recent Change. I am surprised Mr. Owens can make that statement because U.S. West, as well as every other RBOC, has refused to talk about our Recent Change proposal, so I do not even know how he could assert that it is a sham. He does not even understand it.

With Recent Change --

MS. MATTEY: All right. Let's keep it --

MR. FALCONE: Okay. With Recent Change, the CLEC has to do something. The ILEC disconnects the customer's loop functionality from the port functionality. The CLEC has to go in and perform a complementary Recent Change to reconnect the loop functionality with the port functionality The CLEC is actually recombining the elements, as opposed to the sham of collocation.

Order switch ports ahead of time is next to useless because we do not know what customers we are going to have. If we had some spare switch ports, and that is assuming that the ILECs have a lot of spare switch ports